



# TechBriefs

National Aeronautics and  
Space Administration



**Electronic Components and Circuits**



**Electronic Systems**



**Physical Sciences**



**Materials**



**Computer Programs**



**Mechanics**



**Machinery**



**Fabrication Technology**



**Mathematics and Information Sciences**



**Life Sciences**

# INTRODUCTION

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Carolina Blake  
(650) 604-0893 or  
[cblake@mail.arc.nasa.gov](mailto:cblake@mail.arc.nasa.gov)

### Dryden Flight Research Center

Lee Duke  
(805) 258-3802 or  
[lee.duke@dfrc.nasa.gov](mailto:lee.duke@dfrc.nasa.gov)

### Goddard Space Flight Center

George Alcorn  
(301) 286-5810 or  
[galcorn@gsfc.nasa.gov](mailto:galcorn@gsfc.nasa.gov)

### Jet Propulsion Laboratory

Merle McKenzie  
(818) 354-2577 or  
[merle.mckenzie@ccmail.jpl.nasa.gov](mailto:merle.mckenzie@ccmail.jpl.nasa.gov)

### Johnson Space Center

Hank Davis  
(281) 483-0474 or  
[hdavis@gp101.jsc.nasa.gov](mailto:hdavis@gp101.jsc.nasa.gov)

### John F. Kennedy Space Center

Gale Allen  
(407) 867-6626 or  
[galeallen-1@ksc.nasa.gov](mailto:galeallen-1@ksc.nasa.gov)

### Langley Research Center

Dr. Joseph S. Heyman  
(804) 864-6005 or  
[j.s.heyman@larc.nasa.gov](mailto:j.s.heyman@larc.nasa.gov)

### Glenn Research Center

Larry Viterna  
(216) 433-3484 or  
[cto@lerc.nasa.gov](mailto:cto@lerc.nasa.gov)

### George C. Marshall Space Flight Center

Sally Little  
(256) 544-4266 or  
[sally.little@msfc.nasa.gov](mailto:sally.little@msfc.nasa.gov)

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Kirk Sharp  
(228) 688-1929 or  
[ksharp@ssc.nasa.gov](mailto:ksharp@ssc.nasa.gov)

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Small Business Innovation  
Research Program (SBIR) &  
Small Business Technology  
Transfer Program (STTR)  
(202) 358-4652 or  
[cray@mail.hq.nasa.gov](mailto:cray@mail.hq.nasa.gov)

#### Dr. Robert Norwood

Office of Aeronautics and Space  
Transportation Technology (Code R)  
(202) 358-2320 or  
[rnorwood@mail.hq.nasa.gov](mailto:rnorwood@mail.hq.nasa.gov)

#### John Mulcahy

Office of Space Flight (Code MP)  
(202) 358-1401 or  
[jmulcahy@mail.hq.nasa.gov](mailto:jmulcahy@mail.hq.nasa.gov)

#### Gerald Johnson

Office of Aeronautics (Code R)  
(202) 358-4711 or  
[g\\_johnson@aeromail.hq.nasa.gov](mailto:g_johnson@aeromail.hq.nasa.gov)

#### Bill Smith

Office of Space Science (Code S)  
(202) 358-2473 or  
[wsmith@sm.ms.oss.hq.nasa.gov](mailto:wsmith@sm.ms.oss.hq.nasa.gov)

#### Roger Crouch

Office of Microgravity Science  
Applications (Code U)  
(202) 358-0689 or  
[rcrouch@hq.nasa.gov](mailto:rcrouch@hq.nasa.gov)

#### Granville Paules

Office of Mission to Planet Earth  
(Code Y)  
(202) 358-0706 or  
[gpaules@mtpe.hq.nasa.gov](mailto:gpaules@mtpe.hq.nasa.gov)



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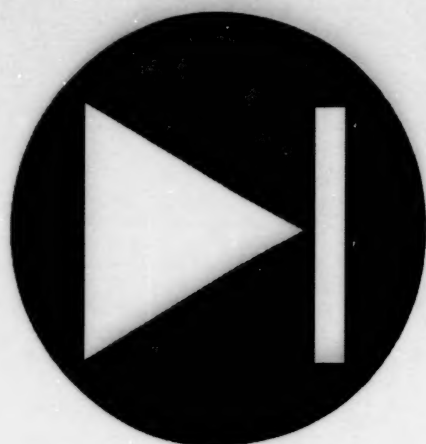
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# **Electronic Components and Circuits**

## **Hardware, Techniques, and Processes**

- 7 Series-Connected Boost Regulators
- 8 Improved Q-Switch Drivers
- 9 Improved Successive-Approximation ADCs With Charge Balancing
- 10 Seven-Element Circularly Polarized Patch Antenna
- 11 MMIC Converters for K- and Ka-Band Communications